

### **REMARKS**

This communication is a full and timely response to the aforementioned Office Action dated July 22, 2009. By this communication, claims 9-15 are amended, and claims 16-20 are added. Therefore, claims 9-20 are pending in the application. Claims 9 and 12 are independent.

Reconsideration of the application and withdrawal of the rejections of the claims are respectfully requested in view of the foregoing amendments and the following remarks.

#### **I. Interview**

Applicants thank the Examiner for kindly conducting an interview with Applicants' undersigned representative on November 18, 2009. During the interview, Applicants' representative discussed distinguishing features of the exemplary embodiments of the present application in view of the disclosures of the applied references, particularly Bauch et al. (U.S. 2004/0177359, hereinafter "Bauch"). Applicants appreciate the Examiner's candor in explaining his interpretation of the applied references.

The distinguishing features of the claimed invention are summarized below.

#### **II. Drawing Objection**

A replacement formal drawing of Figure 2 is submitted herewith to correct the informalities noted by the Office. No new matter has been added via the revisions to Figure 2. Applicants respectfully request that the objection to the drawings be withdrawn.

#### **III. Amendments to the Specification**

Minor revisions have been made to the specification to correct typographical errors and to remove references to claim numbers, in view of the possibility that claim numbers can change during prosecution. The specification amendments are editorial in nature and do not add new matter. Approval and entry of the amendments to the specification are respectfully requested.

#### **IV. Rejections Under 35 U.S.C. § 112**

Claim 12 has been amended to overcome its indefiniteness rejection.

Applicants respectfully request that the rejection of claims 12-15 under 35 U.S.C. § 112, second paragraph, be withdrawn.

#### **V. Rejections Under 35 U.S.C. § 103**

A. Claims 9 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauch in view of Shakib et al. (U.S. 6,321,274, hereinafter "Shakib") and further in view of Wei (U.S. 5,778,228).

Without acquiescing to this rejection, independent claims 9 and 12 have each been amended to emphasize distinctions between the claimed invention and the applied references.

The amendments to claims 9 and 12 are supported throughout the specification and drawings. See, for example, lines 14-27 on page 4, and lines 17-23 on page 7 of the original specification.

With reference to Figure 1, for example, an exemplary embodiment of the present invention provides a system for communication between remote objects 5, which are configured to be accessed as web services and which are associated with a service provider 10, and client-end local proxies 3 associated with a client 1 in a computer network 9.

In the exemplary system, the service provider 10 has a general service 8 installed therein, in addition to existing services 5. The general service 8 can switch one or more service calls from a client 1 to at least one service 5 among the existing services 5, and transmit one or more response messages to the client 1 from the at least one service 5.

In the exemplary system, the client 1 has an optimization layer 6 implemented therein, in addition to the local proxies 3. The optimization layer 6 contains at least one cache having stored therein response messages to service calls. The optimization layer 6 is configured to receive service calls from at least one client application 2 via at least one of the local proxies 3.

In addition, the optimization layer 6 is configured to determine whether a received service call is addressed by at least one response message stored in the at

least one cache, and to delay and/or suppress transmission of a received service call upon determining that the received service call is addressed by at least one response message stored in the at least one cache. Furthermore, the optimization layer 6 is configured to combine received service calls into at least one call group.

The client 1 also includes a general proxy 7 configured to carry out grouped service calls, and to return response messages received from the service provider 10 to the optimization layer 6. According to an exemplary embodiment, the optimization layer 6 is configured to evaluate the response messages received by the general proxy 7 before passing the response messages to a client application 2 via a corresponding one of the local proxies 3.

Accordingly, the optimization layer 6 provides optimization, in part, by delaying or suppressing service calls for which there is an appropriate response message stored in the cache of the optimization layer. Therefore, prior to sending a service call from a client application, the optimization layer 6 determines whether there is an appropriate response message stored for a received service call, and delays and/or suppresses transmission of a service call for which there is already an appropriate response message. As a result, the optimization layer 6 optimizes the communication capabilities of both the client 1 and the service provider 10 (including the network 9) by allowing service calls for which there is no stored response message to be transmitted, while the transmission of service calls for which there is an appropriate stored response message is delayed and/or suppressed.

Claims 9 and 12 recite various features of the above-described exemplary embodiment. In particular, claim 9 recites that the client has an optimization layer implemented therein, in addition to the local proxies. Claim 9 recites that the optimization layer contains at least one cache having stored therein response messages to service calls. In addition, claim 9 recites that the optimization layer is configured to receive service calls from at least one client application via at least one of the local proxies, *to determine whether a received service call is addressed by at least one response message stored in the at least one cache, and to delay and/or suppress transmission of a received service call upon determining that the received service call is addressed by at least one response message stored in the at least*

*one cache*. Furthermore, claim 9 recites that the optimization layer is configured to combine received service calls into at least one call group.

The method of claim 12 comprises features similar to the above-described features of claim 9.

In an attempt to arrive at the features of the claimed invention, the Office alleged that the private area network (PAN) core 210 of the PAN client 220 of Bauch corresponds to the optimization layer as recited in claims 9 and 12.

Bauch discloses that the PAN core 210 receives application requests from application clients 201-203 via application agents 221-223 and an agent API (see paragraph [0029]). The PAN core 210 then selects a particular PAN server 320 (see Fig. 3) for each application request (if a particular PAN server has not already been selected) and then stores the application request in a buffer 240 dedicated for the selected PAN server 320 (see paragraphs [0032] and [0038]). The PAN core 210 then sends the buffered requests to the particular PAN server 320 that was selected to receive the requests.

However, Bauch does not disclose or suggest that any of the buffers 240 of the PAN core 210 includes stored response messages. Instead, the buffer 240 is merely for temporarily storing outgoing application requests. Furthermore, Bauch does not disclose or suggest that the PAN core 210 determines whether there is a response message stored in one of the buffers 240 that addresses any of the received application requests.

Accordingly, in contrast to claim 9, Bauch does not disclose or suggest an optimization layer of a client which contains at least one cache having stored therein response messages, where the optimization layer is configured to determine whether a received service call is addressed by at least one response message stored in the at least one cache, and to delay and/or suppress transmission of a received service call upon determining that the received service call is addressed by at least one response message stored in the at least one cache, as recited in claim 9. Applicants respectfully submit that there is no disclosure similar to this feature in Bauch.

Accordingly, Applicants respectfully submit that Bauch does not disclose or suggest at least the optimization layer as recited in claim 9. Furthermore, Bauch

does not disclose or suggest the features of the optimization layer as recited in claim 12.

Furthermore, by failing to disclose or the suggest the features of the optimization layer in claims 9 and 12, Bauch also cannot disclose or suggest the features of the general proxy and general service operating in conjunction with the features of the optimization layer.

Shakib and Wei also do not disclose or suggest these features of claims 9 and 12. Therefore, Applicants respectfully submit that Shakib and Wei cannot cure the deficiencies of Bauch for failing to disclose or suggest all the recited features of claims 9 and 12.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that claims 9 and 12 are patentable over Bauch, Shakib and Wei, since these references, either individually or in combination, do not disclose or suggest all the recited features of claims 9 and 12.

B. Dependent claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauch in view of Shakib and Wei, and in even further view of Kumar et al. (U.S. 7,130,890, hereinafter "Kumar"). Dependent claims 11 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauch in view of Shakib and Wei, and in even further view of Krishnamurthy et al. (U.S. 6,578,113, hereinafter "Krishnamurthy"). Dependent claims 14 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauch in view of Shakib, Wei, and Krishnamurthy, and in even further view of Kumar.

As discussed above, Bauch, Shakib and Wei do not disclose or suggest all the recited features of claims 9 and 12, namely the features of the optimization layer.

Similarly, Kumar and Krishnamurthy also do not disclose or suggest the recited features of the optimization layer, as recited in claims 9 and 12. Consequently, Kumar and Krishnamurthy cannot cure the deficiencies of Bauch, Shakib and Wei for failing to disclose or suggest all the recited features of claims 9 and 12.

Therefore, one skilled in the art would not have reason or been motivated to combine Bauch, Shakib, Wei, Kumar and Krishnamurthy in an attempt to arrive at

the subject matter of claims 9 and 12, since these references do not give any indication of how the claimed invention can be obtained. Furthermore, no obvious combination of Bauch, Shakib, Wei, Kumar and Krishnamurthy would arrive at the subject matter of claims 9 and 12, since these references, either individually or in combination, do not disclose or suggest all the recited features of the claimed invention.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that claims 9 and 12, as well as claims 10, 11 and 13-20 which depend therefrom, are patentable over the applied references.

Dependent claims 10, 11 and 13-20 recite further distinguishing features over the applied references. The foregoing explanation of the patentability of independent claims 9 and 12 is sufficiently clear such that it is believed to be unnecessary to separately demonstrate the additional patentable features of the dependent claims at this time. However, Applicants reserve the right to do so should it become appropriate.

## **VI. Conclusion**

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. Accordingly, a favorable examination and consideration of the instant application are respectfully requested.

If, after reviewing this Amendment, the Examiner believes there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: /Jonathan R. Bowser/  
Jonathan R. Bowser  
Registration No. 54574  
Patrick C. Keane  
Registration No. 32858

**Customer No. 21839**  
703 836 6620